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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,127	10/03/2000	Mingjun Liu	2000-073	7288

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EXAMINER

MULLIS, JEFFREY C

ART UNIT PAPER NUMBER

1711

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,127

Applicant(s)

LIU ET AL.

Examiner

Jeffrey C. Mullis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 23, 25, 28 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 24, 26, 27 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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All remaining rejections and/or objections follow.

Applicants' claims 20-29 filed with the amendment of 12-18-02 have been renumbered as claims 23-32 in accordance with Rule 126.

Claims 1-16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

The term "vinyl alcohol" as recited in claims 1 and 8 is unclear as to what is intended given that the instant claims recite that the vinyl alcohol is "at least one monomer" and not a monomer unit despite the fact that vinyl alcohol does not exist. While polymers containing vinyl alcohol units do exist, the monomer from which vinyl alcohol polymers are derived is generally a precursor containing a protected vinyl alcohol monomer which is hydrolyzed after polymerization. It is therefore unclear what is intended.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) The invention was described in (1) an application for patent, published under Section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-16, 23, 25, 28 and 30-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matyjaszewski et al. (USP 5,807,937).

Matyjaszewski et al. disclose a process in which a block of styrene is formed under living polymerization conditions and following which mixed blocks of maleic anhydride and styrene are formed by sequential addition of maleic anhydride. Note Example 15 in column 47 in this regard. Since maleic anhydride and

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styrene have much different polarities, it would reasonably appear that applicants' characteristic is inherent.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 8-16, 23, 25, 28 and 30-32 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Klaerner et al. (United States Patent Application Publication 2002/0013430).

See the previous Office action at page 5 line 1 et seq.

Claim 29 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 29 contains no limitation not already found and the claim from which it depends.

Applicants' arguments filed 11-27-02 have been fully considered but they are not deemed to be persuasive.

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Applicants' remarks regarding the rejection under 35 U.S.C. § 112 second paragraph is moot since this rejection has been withdrawn.

With regard to the rejection under 35 U.S.C. § 102 relying upon Matyjaszewski, applicants argue that claim 8 as amended does not disclose the specific monomers listed in claim 8. The Examiner does not agree with this since Example 15 of Matyjaszewski et al. disclose the use of maleic anhydride and styrene as is embraced by the monomers of claim 8. Applicants argue that the polymers cited in the Office action do not have an ABA structure as is required by claim 8. The Examiner does not agree that Example 15 does not have the structure required by claim 8. Note that maleic anhydride is added in portions in Example 15 and therefore would have a number of blocks, a first block formed by styrene and additional blocks formed by each addition of maleic anhydride and therefore would contain at least three blocks as required by claim 8. Similarly, Klaerner discloses a process in which sequential addition of monomers is performed and in which a different block would inherently be formed by each sequential addition of monomers. Note for instance the section entitled "Styrene-Random-Acrylic Acid-Block-n-Butyl Acrylate-Random Acrylic Acid Block" just above paragraph 203 in Klaerner et al. in which styrene, acrylic acid and butyl acrylate are added sequentially.

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With regard to applicants' arguments filed with the amendment of 12-18-02 pertaining to Matyjaszewski, it is not the position of the Examiner that any disclosure in Matyjaszewski et al. except with regard to Example 15 of Matyjaszewski et al. is pertinent to the rejection of the instant claims. However applicants' remarks are not pertinent to Example 15.

Claims 24, 26, 27 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

This Office action is not being made FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Mullis whose telephone number is (703) 308-2820. The examiner can normally be reached on Monday-Friday from 9:30 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for this Group is before final (703) 872-9310 and after final (703) 8729311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2351.

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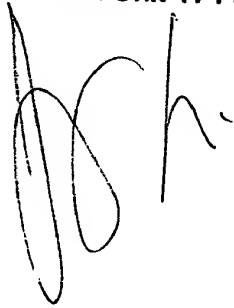
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J. Mullis:cdc

February 21, 2003

Jeffrey Mullis
Primary Examiner
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A handwritten signature in black ink, appearing to be 'JMh', located below the printed name and title of Jeffrey Mullis.